

kinds of intoxication and infection, epilepsy and conditions of psychomotor excitation. Prof. Spielmeyer believes that such changes can be produced by circulatory disturbances, the underlying factor being, not a definite disease, but some functional derangement. They could thus be indirectly related to dementia præcox. In spite of the frequency of negative *post-mortem* findings, he is of opinion that dementia præcox is beyond doubt associated with organic changes in the brain, and he bases this conclusion on the following positive findings (from selected cases) :

(1) Cellular loss in the third layer of the cortex, as well as in the deep layers, sometimes associated with large accumulations of fatty material.

(2) In acute cases, phenomena indicating active destruction in the nerve-cells, with regressive changes in the neuroglia, and often the presence of large amounts of disintegration products.

Although these findings sufficiently establish the organic basis of the disease, they do not represent a definite picture on which alone a diagnosis can be given.

S. ANTONOVITCH.

*The Distribution of Calcium between Blood and Cerebro-spinal Fluid in Mental Diseases.* (*Amer. Journ. Psychiat.*, July, 1931.) Katzenelbogen, S., and Goldsmith, H.

The blood-calcium in organic psychosis ranges between 8.1 and 10.9 mgrm. %. In schizophrenia, manic-depressive psychosis and mental deficiency blood-calcium was found within normal limits. The cerebro-spinal fluid calcium showed an occasional slight fall in schizophrenia and an occasional rise in organic psychosis. In manic-depressive psychosis and mental deficiency only normal figures were found. The calcium content cannot be helpful for diagnosis. The passage of calcium from blood into fluid follows the trend of bromide. There is evidence that the barrier functions somewhat differently in schizophrenia and organic psychosis. The abnormal permeability suggests that the dysfunction of the barrier presents a part malfunction of a diseased organism.

M. HAMBLIN SMITH.

*Gastro-intestinal Motor Functions in Manic-Depressive Psychoses.* (*Amer. Journ. Psychiat.*, July, 1931.) Henry, G. W.

X-ray observations were made in 96 cases. In the manic phase the position of the viscera is from 1 to 2 in. higher than in the depressive phase. Hypomanic patients present a marked increase and depressed patients a marked decrease in visceral tension and motility. Without medical aid some depressed patients retain food residue for a period longer than two weeks.

M. HAMBLIN SMITH.

*Chemical Changes in the Blood during the Course of Alcoholic Delirium Tremens.* (*Ann. Méd. Psych.*, February, 1931.) Toulouse, E., Courtois, A., and Russell, Mlle.

The authors, who have carried out investigations for a period of two years, find that the urea, sugar and cholesterol content of the

blood is normal, or only a little raised at the onset of delirium tremens. During the course of the attack there is retention of these substances, this being most marked in the case of urea. After the attack the total nitrogen does not fall to normal for several days, and in fatal cases it continues to rise to the time of death. Bile-pigments in the blood are always increased from the first.

S. M. COLEMAN.

*The Experimental Production and Prevention of Degeneration in the Spinal Cord.* (*Brain*, September, 1931.) Mellanby, E.

The author experimented on puppies with a diet deficient in vitamin A or carotene. He found degenerative changes in the spinal cord in the form of demyelination of the nerve-fibres. The addition of ergot to the diet increased these changes. The presence in the diet of any rich source of vitamin A, such as liver oil, whole milk, butter, or some source of carotene, such as green vegetables or carrots or carotene itself, prevents or diminishes these degenerative changes even when ergot is eaten. Cord degeneration does not develop until the reserves of vitamin A in the liver are exhausted. In animals in which these degenerative changes have taken place, the addition of vitamin A or carotene to the diet caused very great improvement in the clinical condition. The author discusses the application of these results to neurological conditions in man, e.g., convulsive ergotism, pellagra, lathyrism, cord symptoms in pernicious anæmia, disseminated sclerosis, and tabes dorsalis. He considers that deficiency in vitamin A and carotene is responsible for the cord lesions in pellagra. The fact that good results are obtained in treating the symptoms of subacute combined degeneration with whole liver but not with liver extract, the author thinks is due to the presence of vitamin A in the whole liver, but not in the extract.

The mental changes observed in the experimental investigations suggest that the functioning of the more highly developed parts of the brain is greatly influenced by dietetic constituents.

The author puts forward the suggestion, that the beneficial effect of malarial treatment on general paralysis is due to the liberation of large quantities of vitamin A and other protective factors from the livers of infected patients.

G. W. T. H. FLEMING.

*The Equilibrium between Cerebro-spinal Fluid and Blood-Plasma. V. The Osmotic Pressure (Freezing-point Depression) of Human Cerebro-spinal Fluid and Blood-Serum.* (*Brain*, September, 1931.) Fremont-Smith, F., et alii.

The authors found that the human spinal fluid is ordinarily a dialysate in osmotic equilibrium with the blood-serum. In 71 comparative determinations of freezing-point depression of human blood-serum and spinal fluid in non-meningitic cases, the results, within the limits of experimental error were identical.

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